

Applied Ergonomics 32 (2001) 629-632

APPLIED ERGONOMICS

www.elsevier.com/locate/apergo

Index to Volume 32 (2001), Nos 1-6, pages 1-632

Articles

A case study in iterative keyboard design using participatory design techniques *Lindgaard*, G., Caple, D. 71

A compatible chord code for inputting elements of Chinese characters Mou, W. and Zhang, K. 293

A field evaluation of monitor placement effects in VDT users *Psihogios*, *J.P.*, *Sommerich*, *C.M.*, *Mirka*, *G.A.* and *Moon*, *S.D.* 313

A system for the measurement of grip forces and applied moments during hand tool use McGorry, R.W. 271

Adapting verbal protocol methods to investigate speech systems use Karsenty, L. 15

Aerobic power and muscle strength among young and elderly workers with and without physically demanding work tasks Schibye, B., Hansen, A.F., Sogaard, K. and Christensen, H. 425

An evaluation of physiological demands and comfort between the use of conventional and lightweight self-contained breathing apparatus Hooper, A.J., Crawford, J.O. and Thomas, D. 399

An investigation of the effects of touchpad location within a notebook computer Kelaher, D., Nay, T., Lawrence, B., Lamar, S., Sommerich, C.M. 101

An investigation of underfoot accidents in a MAIM database *Davies*, *J.C.*, *Stevens*, *G. and Manning*, *D.P.*. 141

An investigation of how acute muscle pain modulates performance during computer work with digitizer and puck Birch, L., Arendt-Nielsen, L., Graven-Nielsen, T. and Christensen, H. 281

Anthropometric study of Mexican primary school children Prado-León, L.R., Avila-Chaurand, R. and González-Muñoz, E.L. 339

Anthropometry of Norwegian light industry and office workers *Bolstad*, G., Benum, B. and Rokne, A. 239

Assessment of work postures and movements using a video-based observation method and direct technical measurements Juul-Kristensen, B., Hansson, G.-Å., Fallentin, N., Andersen, J.H. and Ekdahl, C. 517

Biomechanical analysis of peak and cumulative spinal loads during simulated patient-handling activities: a substudy of a randomized controlled trial to prevent lift and transfer injury of health care workers Daynard, D., Yassi, A., Cooper, J.E., Tate, R., Norman, R. and Wells, R. 199

Buttock and back pressure distribution tests on seats of mobile agricultural machinery Hostens, I., Papaioannou, G., Spaepen, A. and Ramon, H. 347

Comparison of laboratory studies with predictions of the required sweat rate index (ISO 7933) for climates with moderate to high thermal radiation Forsthoff, A., Mehnert, P. and Neffgen, H. 299

Comparison of measurement accuracy between two types of wrist goniometer systems *Jonsson*, *P. and Johnson*, *P.W.* **599**

Computer terminal work and the benefit of microbreaks McLean, L., Tingley, M., Scott, R.N. and Rickards, J. 225

Cybersickness in the presence of scene rotational movements along different axes Lo, W.T., So, R.H.Y. 1

Development of a portable test device for assessing on-site floor slipperiness: an interim report *Grönqvist*, R., Hirvonen, M. and Rajamäki, E. 163

Effect of musculoskeletal disorders on prehension strength Sande, L.P., Coury, H.J.C.G., Oishi, J. and Kumar, S. 609

Effect of visual display terminal height on the trapezius muscle hardness: quantitative evaluation by a newly developed muscle hardness meter *Horikawa*, M. 473

Electromyographic and discomfort analysis of confined-space shipyard welding processes Lowe, B.D., Wurzelbacher, S.J., Shulman, S.A. and Hudock, S.D. 255

Embedding ergonomics in hospital culture: top-down and bottom-up strategies *Hignett*, S. 61

Endurance, pain and resumption in fully flexed postures Rose, L., Örtengren, R. and Ericson, M. 501

Evaluation of methods to assess push/pull forces in a construction task *Hoozenans*, *M.J.M.*, van der Beek, A.J., Frings-Dresen, M.H. and van der Molen, H.F. 509

Evaluation of physiological work demands and low back neuromuscular fatigue on nurses working in geriatric wards Hui. L., Ng. G.Y., Yeung, S.S. and Hui-Chan, C.W. 479

Heart rate strain in cable hauler choker setters in New Zealand logging operations Kirk, P.M. and Sullman, M.J. 389

How safe is adventure tourism in New Zealand? An exploratory analysis *Bentley*, T., Page, S.J., Meyer, D., Chalmers, D. and Laird, 1, 327

Identification and analysis of unsatisfactory psychosocial work situations: a participatory approach employing video-computer interaction *Hanse*, *J.J.*, *Forsman*, *M*. 23

Identification of risk factors and countermeasures for slip, trip and fall accidents during the delivery of mail *Bentley*, *T.A. and Haslam*, *R.A.* 127

Impact of a joint labor-management ergonomics program on upper extremity musculoskeletal symptoms among garment workers Herbert, R., Dropkin, J., Warren, N., Sivin, D., Doucette, J., Kellogg, L., Bardin, J., Kass, D. and Zoloth, S. 453

Implementation of a participatory ergonomics program in the rehabilitation of workers suffering from subacute back pain *Loisel. P., Gosselin, L., Durand, P., Lemaire, J., Poitras, S., Abenhaim, L.* 53

Influence of measurement accuracy on the application of the 1991 NIOSH equation Dempsey, P.G., Burdorf, A., Fathallah, F.A., Sorock, G.S., Hashemi, L. 91

LUBA: an assessment technique for postural loading on the upper body based on joint motion discomfort and maximum holding time Kee, D. and Karwowski, W. 357

Marker-less systems for tracking working postures—results from two experiments Pinzke, S. and Kopp, L. 461

Muscle activity and range of motion during active trunk rotation in a sitting posture *Torén*, A. 583

Musculoskeletal, visual and psychosocial stress in VDU operators before and after multidisciplinary ergonomic interventions. A 6 years prospective study—Part II Aarās, A., Horgen, G., Bjorset, H.-H., Ro, O, and Walsoe, H. 559

Passive versus active operator work in automated process control—a job design case study in a control centre *Persson*, A., Wanek, B. and Johansson, A. 441

Polarized task lighting to reduce reflective glare in open-plan office cubicles *Japuntich*, D.A. 485

Physiological effects of back belt wearing during asymmetric lifting Bobick, T.G., Belard, J.-L., Hsiao, H. and Wassell, J.T. 541

Self-motion perception: assessment by realtime computer-generated animations *Parker*, *D.E.*, *Phillips*, *J.O.* 31

Self-reported and measured time of vibration exposure at ultrasonic scaling in dental hygienists Åkesson, I., Balogh, I., Skerfeing, S. 47

Serious stair injuries can be prevented by improved stair design Roys, M.S. 135

Shoe design for prevention of injuries in sport climbing van der Putten. E.P. and Snijders, C.J. 379

Slip, trip and fall accidents: relationship to building features and use of coroners' reports in ascribing cause *Cayless*, S.M. 155

Slips, trips and falls in different work groups
— with reference to age and from a preventive
perspective Kenmilert, K. and Lundholm,
L. 149

Spinal shrinkage during a seated break and standing break during simulated nursing tasks Beynon, C. and Reilly, T. 617

Standing and very slow walking: foot painpressure threshold, subjective pain experience and work activity Messing, K., Kilbom, Å. 81

The composition of a graph on the decline of total body strength with age based on pushing, pulling, twisting and gripping force Voorbij, A.I.M. and Steenbekkers, L.P.A. 287

The effect of surface roughness and contaminant on the dynamic friction of porcelain tile Chang, W.-R. 173

The effect of roughness, floor polish, water, oil and ice on underfoot friction: current safety footwear solings are less slip resistant than microcellular polyurethane *Manning*, D.P. and Jones, C. 185

The effect of the descent technique and truck cabin layout on the landing impact forces Patenaude, S., Marchand, D., Samperi, S. and Belanger, M. 573

The effects of container design and stair climbing on maximal acceptable lift weight, wrist posture, psychophysical, and physiological responses in wafer-handling tasks *Chung. H.-C. and Wang. M.-J.J.* 593

The ergonomics of flight management systems: fixing holes in the cockpit certification net Singer, G. and Dekker, S. 247

The impact of draught related to air velocity, air temperature and workload *Griefahn*, B., Künemund, C. and Gehring, U. 407

The influence of supporting the Oxylog instrument on estimated maximal aerobic capacity during a step test and heart rate in a lifting test Bales, D.W., Craig, B.N., Congleton, J.J., Kerk, C.J., Amendola, A.A., Gaines, W.G. and Jenkins, O.C. 367

The perceptions of managers and accident subjects in the service industries towards slip and trip accidents *Lehane*, *P. and Stubbs*, *D.* 119

The slip resistance of common footwear materials measured with two slipmeters *Chang*, W.-R. and Matz, S. 549

The test-retest reliability of a new occupational risk factor questionnaire for outcome studies of low back pain *Halpern, M., Hiebert, R., Nordin, M., Goldsheyder, D., Crane, M.* 39

Towards successful physical stress reducing products: an evaluation of seven cases de Looze, M.P., Urlings, I.J.M., Vink, P., van Rhijn, J.W., Miedema, M.C., Bronkhorst, R.E. and van der Grinten, M.P. 525

Validity of fixed-interval observations for postural assessment in construction work Paquet, V.L., Punnett, L. and Buchholz, B. 215

Workplace assessment: a tool for occupational health and safety management in small firms? Jensen, P., Alstrup, L. and Thoft, E. 433

Authors of articles

Aaras, A. 559 Abenhaim, L. 53 Akesson, I. 47 Alstrup, L. 433 Amendola, A.A. 367 Andersen, J.H. 517 Arendt-Nielsen, L. 281 Avila-Chaurand, R. 339 Bales, D.W. 367 Balogh, I. 47 Bardin, J. 453 Bélanger, M. 573 Belard, J.-L. 541 Bentley, T. 327 Bentley, T.A. 127 Benum, B. 239 Beynon, C. 617 Birch, L. 281 Bjørset, H.-H. 559 Bobick, T.G. 541 Bolstad, G. 239 Bronkhorst, R.E. Buchholz, B. 215 Burdorf, A. 91 Caple, D. 71 Cayless, S.M. 155 Chalmers, D. 327 Chang, W.-R. 173, 549 Christensen, H. 281, 425 Chung, H.-C. 593 Congleton, J.J. 367 Cooper, J.E. 199 Coury, H.J.C.G. 609 Craig. B.N. 367 Crane, M. 34 Crawford, J.O. 399 David, G.C. 117 Davies, J.C. 141 Daynard, D. 199 de Looze, M.P. 525 Dekker, S. 247 Dempsey, P.G. 91 Doucette, J. 453 Dropkin, J. 453 Durand, P. 53 Ekdahl, C. 517 Ericson, M. 501 Fallentin, N. 517 Fathallah, F.A. 91 Forsman, M. 23 Forsthoff, A. 299 Frings-Dresen, M.H.W. 509 Gaines, W.G. 367 Gehring, U. 407 Goldsheyder, D. 34 González-Muñoz, E.L. Gosselin, L. 53 Graven-Nielsen, T. Griefahn, B. 407 Grönqvist, R. 163 Halpern, M. 34 Hanse, J.J. 23 Hansen, A.F. 425 Hansson, G.-A. 517

Hashemi, L. 91 Haslam, R.A. 127 Herbert, R. 34, 453 Hignett, S. 61 Hirvonen, M. 163 Hooper, A.J. 399 Hoozemans, M.J.M. 509 Horgen, G. 559 Horikawa, M. 473 Hostens, I. 347 Hsiao, H. 541 Hudock, S.D. 255 Hui. L. 479 Hui-Chan, C.W.Y. 479 Japuntich, D.A. 485 Jenkins, O.C. 367 Jensen, P.L. 433 Johansson, A. 441 Johnson, P.W. 599 Jones, C. 185 Jonsson, P. 599 Juul-Kristensen, B. 517 Karsenty, L. 15 Karwowski, W. 357 Kass, D. 453 Kee, D. 357 Kelaher, D. 101 Kellogg, L. 453 Kemmlert, K. 149 Kerk, C.J. 367 Kilbom, A. 81 Kirk, P.M. 389 Kopp, L. 461 Kumar, S. 609 Künemund, C. 407 Laird, I. 327 Lamar, S. 101 Lawrence, B. 101 Lehane, P. 119 Lemaire, J. 53 Lindgaard, G. 71 Lo, W.T. 1 Loisel, P. 53 Lowe, B.D. 255 Lundholm, L. 149 Manning, D.P. 141, 185 Marchand, D. 573 Matz. S. 549 McGorry, R.W. 271 McLean, L. 225 Mehnert, P. 299 Messing, K. 81 Meyer. D. 327 Miedema, M.C. 525 Mirka, G.A. 313 Moon, S.D. 313 Mou, W. 293 Nay. T. 101 Neffgen, H. 299 Ng, G.Y.F. 479 Nordin, M. 34 Norman, R. 199 Oishi, J. 609 Örtengren, R. 501 Page, S.J. 327 Papaioannou. G. 347

Paquet, V.L. 215

Parker, D.E. 31 Patenaude, S. 573 Persson, A. 441 Phillips, J.O. 31 Pinzke, S. 461 Poitras, S. 53 Prado-León, L.R. 339 Psihogios, J.P. 313 Punnett, L. 215 Rajamäki, E. 163 Ramon, H. 347 Reilly, T. 617 Rickards, J. 225 Ro. O. 559 Rokne, A. 239 Rose, L. 501 Roys, M.S. 135 Samperi, S. 573 Sande, L.P. 609 Schibye, B. 425 Scott, R.N. 225 Shulman, S.A. 255 Singer, G. 247 Sivin, D. 453 Skerfving, S. 47 Snijders, C.J. 379 So. R.H.Y. 1 Søgaard, K. 425 Sommerich, C.M. 101, 313 Sorock, G.S. 91 Spaepen, A. 347 Steenbekkers, L.P.A. 287 Stevens, G. 141 Stubbs, D. 119 Sullman, M.J. 389 Tate, R. 199 Thoft, E. 433 Thomas, D. 399 Tingley, M. 225 Torén, A. 583 Urlings, I.J.M. 525 van der Beek, A.J. 509 van der Grinten, M.P. 525 van der Molen, H.F. 509 van der Putten, E.P. 379 van Rhijn, J.W. 525 Vink, P. 525 Voorbij, A.I.M. 287 Walsøe, H. 559 Wanek, B. 441 Wang, M.-J.J. 593 Warren, N. 453 Wassell, J.T. 541 Wells, R. 199 Wurzelbacher, S.J. 255 Yassi, A. 199 Yeung, S.S.M. 479 Zhang, K. 293 Zoloth, S. 453

Keywords

Accident model 141
Accident prevention 141
Accident subjects 119
Accidents 135, 149

Adventure tourism 327 Ageing 287, 425 Air temperature 407 Air velocity 407 Air-cushion 347 Animations 31 Annoyance 407 Anthropometry 239, 339 Architecture 485 Assessment technique 357 Back 479 Back belt 541 Back pain 53, 617 Biomechanical analysis 199 Biomechanics 379 Building and construction 509 Buildings 155 Buttock pressure measurements 347 Causal responsibility 119 Certification 247 Cervical 313 Chinese character inputting 293 Chord combinations of keys 293 Chord keyboard 293 Cockpit 247 Combine seats 347 Comfort 347 Compatibility 293 Computer terminal work 225 Confined space 255 Coroners 155 Correlation 549 Cybersickness 1 Design 135 Draught 407 Dynamic friction 173 Electrogoniometry 215 Electromyography 225, 255 Elements of Chinese characters 293 Endurance 501 Energy expenditure 367 Ergonomic assessment 215 Ergonomics 453 Estimated maximal aerobic capacity 367 Ethnic background 339 Experimental muscle pain 281 Exposure 271 Exposure assessment 509 Exposure time 47 Eyestrain 485 Falls 149, 155 Falls outdoors 127 Fire fighters 399 Flight management system 247 Floor roughness 185 Floorings 163 Foot 81 Footwear materials 549 Forestry 389 Fully flexed postures 501 Garment 453 Glare 485 Goniometer 517 Goniometer and accuracy 599 Grip force 271 Grip strength 287

Hallux valgus 379

Hand tools 271
Heart rate 389
Heat stress index 299
Hospital 479
Hospital ergonomics 61
Human factors management 433
Impact force 573
Inclinometer 517
Information systems 15
Injury analysis and prevention 327
Intervention 453
Interview method 15
Isometric force exertion 287
Iterative processes 71
Job design 441
Job strain 23
Joint discomfort 357
Keyboard design 71
L ₅ -S ₁ torque and compressive force 573
Lighting conditions 559
Linear correlation 173
MAIM 141
Managers 119
Manual handling 61
Manual lifting 541
Manual materials handling 91, 367, 525
Measurement accuracy 91
Microcellular polyurethane 185
Monitor 313
Mountain and marine recreation 327
Muscle activity 583
Muscle fatigue 255
Muscle hardness 473
Muscle hardness meter 473
Muscular strength 609
Musculoskeletal discomfort 101
Musculoskeletal illness 559
NIOSH equation 91
Norwegian males and females 239
Notebook computer 101
Nurses 617
Observation 215
Observation method 517
Optometry 485
Oxygen consumption 399
Pain 501
Pain-pressure throughold 91

Pain-pressure threshold 81
Participatory design 71
Participatory ergonomics 23, 53, 525

Patient handling 199
Perception 31
Physical capacity 425
Physical load 525
Physiology 541
Pointing device 101
Polarized light 485
Postal delivery workers 127
Postural loading 357
Posture analysis 215
PPE 399
Prehension 609
Prevention 149
Process operator 441
Product development 525
Psychophysical responses 593
Psychosocial work environment 441
Pulling force 287
Pushing and pulling 509
Pushing force 287
Range of motion 583
Ranking 549
Recovery 501
Rehabilitation 53
Repetitive work 517
Required sweat rate 299
Rest breaks 225
Risk assessment 433
Risk management 61
Safety interventions 127
Scene movement 1
Screen height 473
Secular changes 239
Self-estimation 47
Self-motion 31
Short-distance walking 81
Slip 149
Slip resistance 185, 549
Slip trip and fall accidents 127
Slipmeter 163
Slips 119
Small enterprises 433
Soling roughness 185
Speech system 15 Spinal loading 199
Sport injury 379
Stadiometry 617
Stair climbing 593
Stairs 135
0.000

Standing 81
Strength score 287
Surface roughness 173
Task light 485
Thermal radiation 299
Transitional friction. 163
Trapezius muscle 473
Trips 119, 149
Truck descent 573
Trunk axial rotation 583
Twisting force 287
Underfoot accidents 141
Uneventful monotony 441
Upper body 357
Upper extremity 281
Usability study 15
User population 339
VDT work 473
VDU workplaces 559
Vection 1
Vibration 47
Video-confrontation 23
Virtual reality 1
Visual conditions 559
Visual discomfort 559
Visual display terminal 313
Visual display unit 281
Wafer containers 593
Waste collectors 425
Welding 255
Work physiology 479
Work sampling 215
Work-related musculoskeletal disorders 609 Workload 389, 407
Wrist 599
Wrist posture 101
with brandic 101
Patents Alort

PatentsAlert

111, 307, 419, 535, 623

Editorial

117

Note from the Editors

305

